## IWG-6 Future Conferences Interim Report

#### 6.1. Introduction

The original terms of reference and work program sought recommendations and proposals related to the preliminary WRC-97 and WRC-99 agendas. The Addendum to the terms of reference and work program called for a recommended proposal for future FCC conference preparation. The WRC-95 agenda has been set by the Kyoto Plenipot.

IWG-6 held four meetings. Four new proposals were submitted to IWG-6 for review and are discussed in this report. IWG-5 submitted a paper for consideration. IWG-3 also referred matters to IWG-6. One proposal was submitted for the Preliminary Agenda for WRC-99.

Finally, IWG-6 believes that ongoing efforts to prepare for international conferences is critical. IWG-6 members believe that timely Advisory Committee renewal is the most effective means of ensuring necessary input to the United States Government.

## 6.2. WRC-97 Agenda

## 6.2.1. New proposals identified by IWG-6

6.2.1.1 Proposal for Use of the 5.2 GHz MLS Extension Band for High Speed Wireless Data System - Submitted by AT&T

AT&T proposes that the 5.2 GHz MLS extension band, which is expected to have limited usage by the FAA, be additionally allocated to the Mobile Service to accommodate High Speed Wireless Data (HSWD) systems and that this subject be put on the agenda of WRC-97.

HSWD systems are short range radio links operating at signaling rates in excess of 20 Mb/s at about 1 watt of power. HSWD systems represent one end, the high performance/short range end, of a spectrum of untethered computer communications. These are typically unlicensed private systems with a coverage limited to local premises. At the other end are the wide area mobile data systems such as cellular data and other specialized mobile systems which are normally public, licensed services and promise world-wide access but at much lower throughput and much higher cost per bit.

It is estimated that about 150 MHz of spectrum is needed by HSWD systems to provide an aggregate throughput of 150 Mb/s/hectare which is the minimum required for HSWD systems to permit wireless multi-media services to be deployed effectively.

CEPT has allocated the 5150-5250 MHz segment of the MLS band for use by HSWD systems in the European Community with an additional allocation of 5250-5300 MHz to be available on a national basis.

Sharing studies, summarized by AT&T in the full submission, indicate that sharing between Mobile Satellite Service (MSS) feeder uplinks and HSWD networks is possible. Typical separation distances required are in the order of 5 to 30 miles. Hence provided due care is taken with the siting of MSS ground stations, sharing of this band should be possible.

With the increased use of computers in all walks of life, the need for data transmission at high rates becomes stronger. Computing is moving toward human oriented, interactive systems with multi-media interfaces to the user in which data, text, image and sound are combined. This trend has created the demand for high speed wireless data transmission systems that serve to link the mobile user to the high speed wired networks. These wireless systems require much higher bandwidths than their predecessors.

The recent years have seen explosive growth in mobile communications for data applications. Working within the constraints of the Part 15 rules for the ISM bands, the industry has developed products that are proving to serve a large market demand and has started a broad effort to standardize wireless data systems (see IEEE P802.11). This shows a strong demand from users. However, the ISM bands and the recently allocated UPCS packet data band provide only a small fraction of the signaling speed and aggregate through capacity required by HSWD systems. Really high speed wireless systems are not possible under these allocations nor is multi-media transmission service possible.

HSWD systems will provide benefits to the public in terms of increased freedom of action for computer users, increased efficiency for workers and service providers and better education and health care. HSWD systems will benefit US industry by providing a home market for advanced technology products, improving efficiency and competitiveness and establishing an equal footing in high speed wireless markets.

6.2.1.2 Proposal to Consider Regulatory Aspects of NonGeostationary Fixed Satellite Service Networks - Submitted by Teledesic Corp.

Teledesic believes that there is regulatory uncertainty concerning the use of frequency bands allocated to the fixed-satellite service (FSS). The uncertainty results from the lack of a commonly-agreed interpretation of the Radio Regulations for the accommodation of non-geostationary orbit (non-GSO) FSS (including non-GSO MSS feeder links). WRC-95 has an agenda item to "consider allocations and regulatory aspects for feeder links for the mobile satellite service (MSS) ...", and it is expected that WRC-95 will consider the use of certain FSS frequency bands for that purpose. However, another, more general form of non-GSO FSS has recently been proposed, e.g., the Teledesic network with 840 low earth orbit satellites. To the extent the decisions of WRC-95 address the accommodation of non-GSO FSS systems only in the frequency bands considered for use for non-GSO MSS feeder links,

there will be a need for further consideration of this issue at WRC-97.

The FSS frequency allocations do not distinguish between GSO and non-GSO systems. Various regulatory provisions govern the use of the FSS allocations by these networks and place restrictions on their operations. One of the key Radio Regulations is RR 2613, which states:

"Non-geostationary space stations shall cease or reduce to a negligible level their emissions, and their associated earth stations shall not transmit to them, whenever there is insufficient angular separation between non-geostationary satellites and geostationary satellites resulting in interference to geostationary satellite space systems in the fixed-satellite service operating in accordance with these regulations."

This RR may relegate non-GSO networks to a lesser or secondary position to the GSO networks by requiring that in cases of unacceptable interference to GSO space systems the elements of the non-GSO network shall cease or reduce their emissions. No similar operational constraint is placed on transmitters associated with GSO networks in the case of interference to non-GSO networks. Thus, the burden for interference avoidance arguably is placed entirely on the non-GSO network. This RR also has been interpreted to provide protection to GSO networks that might be placed into service after a non-GSO network. Thus, not only might the non-GSO network be required to cease transmissions because of known GSO networks, but also the same requirement might be imposed later to protect future GSO networks. This introduces unbounded regulatory uncertainty into the operation of the non-GSO network.

There has evolved a general recognition that both the GSO FSS networks and the non-GSO FSS networks (including non-GSO MSS networks with fixed feeder links in the FSS bands) must have a regulatory base which permits their orderly operation without undue regulatory uncertainty throughout their operational lives. It is within this framework that WRC-95 will address and hopefully resolve the regulatory uncertainty with respect to the non-GSO MSS feeder links, a specific form of fixed satellite service. However, if the WRC-95 decisions do not address the regulatory uncertainties associated with non-GSO FSS operations of proposed systems such as Teledesic outside of those frequencies considered for use for MSS feeder links, then there will be a need for further consideration of non-GSO system operations in the FSS bands under the WRC-97 agenda.

Thus, IWG-6 supports inclusion on the WRC-97 agenda the following language:

"recognizing

that there is a need to provide equitable access to FSS frequency bands by non-geostationary fixed-satellite service networks,

#### resolves

with a view to removing the regulatory uncertainty placed on non-geostationary satellite networks by RR 2613, to consider the regulatory aspects and take the necessary decisions regarding the use of FSS frequency allocations by non-GSO FSS operations, while equitably taking account of the possible interference to and from other satellite networks operating in the FSS."

6.2.1.3 Terrestrial Mobile at 380 - 399.9 MHz for Public Safety Applications - Submitted by TIA

IWG-6 supports (1) inclusion of Resolutions on the WRC-97 agenda to identify terrestrial mobile service spectrum near 400 MHz on a regional or global basis for public safety applications and (2) efforts at WRC-95 both to ensure that the WRC-97 agenda permits such an identification and direction to the Radiocommunication Sector to initiate or continue studies to further this goal.

At WARC-92, it was recognized that some services could best be implemented on a coordinated basis, on common frequencies, internationally. The spectrum allocated at WARC-92, while important, has proved insufficient to meet the need for terrestrial land mobile radio services, particularly to accommodate civilian systems for public safety applications. Normally, finding additional spectrum to support additional terrestrial public safety land mobile applications is virtually impossible. A potentially unique opportunity is about to arise at 380 - 399.9 MHz, spectrum now used by governmental entities such as NATO in the United States and Europe. Recently, some administrations now using the band have indicated a willingness to allow civilian public safety use of the spectrum.

The United States should take the lead in securing the band for a land mobile service that could cross national boundaries and, if required, use common spectrum and/or technologies. A footnote in the Table of Allocations, plus a Resolution, would accomplish this task. In the interim, the 1995 WRC should place this matter on the agenda for WRC-97 and take any permissible steps to begin the process of identifying this spectrum for terrestrial public safety mobile uses.

Below are two draft Resolutions, and a proposed footnote, that would identify the spectrum for public safety uses. RES XX0 is designed to be submitted by the U.S. at WRC-95; RES XX1, and the footnote, could be submitted as part of the conference preparatory work for WRC-97.

### **RESOLUTION NO. XX0**

# Use by the Land Mobile Service of the Frequency Band 380 - 399.9 MHz

#### The 1995 World Radiocommunication Conference

## considering

- a) the existing co-primary allocation to the mobile service near 400 MHz;
- b) the expected rapid growth of terrestrial mobile systems in general and for use in public safety applications;
- c) that additional terrestrial mobile systems are being planned and implemented in various Regions by Administrations;
- d) that spectrum that was heavily used by some administrations between 380 MHz and 399.9 MHz may now be available for additional terrestrial mobile systems for public safety applications;

#### noting

that preliminary studies indicate that new terrestrial mobile systems with regional or global allocations could serve significant unmet needs either across national boundaries or through common equipment;

## noting further

that early international harmonization of additional such systems would have several benefits;

## invites the Radiocommunication Sector

to begin studies with a view to developing suitable and acceptable technical characteristics for new terrestrial mobile systems for public safety applications in the band 380 - 399.9 MHz;

resolves to give the view

that the agenda of the 1997 World Radiocommunication Conference should be amended to include consideration of new terrestrial mobile systems in the band 380 - 399.9 MHz for public safety applications, including, if necessary, modifications of Article 8 of the Radio Regulations applicable to all three regions;

invites the Council

to consider the view given in this Resolution.

## **RESOLUTION NO. XX1**

# Use by the Land Mobile Service of the Frequency Band 380 - 399.9 MHz

#### The 1997 World Radiocommunication Conference

## considering

- a) the existing co-primary allocation to the mobile service near 400 MHz;
- b) the expected rapid growth of terrestrial mobile systems in general, and for use in public safety applications;
- c) that new terrestrial mobile systems are being planned and implemented in various Regions by Administrations;
- d) that spectrum that was heavily used by some administrations between 380 MHz and 399.9 MHz may now be available for additional terrestrial mobile systems for public safety applications;

noting

that preliminary studies indicate that new terrestrial mobile systems with regional and or global allocations could serve significant unmet public safety needs either across national boundaries or through common equipment;

noting further

that early international harmonization of additional allocations and systems would have several benefits;

invites administrations

to give due consideration to the accommodation of other services currently operating in the 380 - 399.9 MHz bands when implementing new terrestrial mobile systems for public safety applications in that band;

invites the Radiocommunication Sector

to continue its studies with a view to developing suitable and acceptable technical characteristics for new terrestrial mobile systems for public safety applications in the band 380 - 399.9 MHz;

#### resolves

that administrations which implement new terrestrial mobile systems for pubic safety applications in the band 380 - 399.9 MHz:

- 1. should make the necessary frequencies available for system development;
- 2. should use those frequencies for public safety applications; and
- 3. should use the relevant international technical characteristics, as identified by the Recommendations of the Radiocommunication Sector.
- ADD 641B The frequency band 380 399.9 MHz is intended for use, on a worldwide basis, by administrations wishing to implement terrestrial mobile systems for public safety applications. The frequency band should be made available for terrestrial mobile systems for public safety applications in accordance with Resolution XX1.

## 6.2.1.4 Transport information and control systems - TIA

IWG-6 supports inclusion on the WRC-97 agenda resolutions identifying potential global spectrum for transport information and control systems (sometimes called Intelligent Transportation Systems (ITS) or Intelligent Vehicle-Highway Systems (IVHS) in the United States) at various frequencies.

International consideration of IVHS technology has begun in the ITU's Radiocommunication Sector. Known in ITU-R Working Party 8A as "Transport Information and Control Systems." ("TICS" is known in the United States as Intelligent Transportation Systems (ITS), previously known as Intelligent Vehicle Highway Systems (IVHS).) IVHS technology is the subject of a proposed new so-called "study question" for the working party. The TICS question is expected to be adopted by the Radiocommunication Sector, and the results of the study would be ready by 1997. The United States actively should support adoption of the question. In order for these results to be considered and adopted in a meaningful way by the ITU, however, they must be addressed by a competent WRC. It is important that the WRC-97 agenda item be targeted toward identification of a worldwide frequency band for this service; this issue should also be raised at WRC-95.

Attached is a draft Resolution designed to be submitted by the U.S. at WRC-95.

## **RESOLUTION NO. XX2**

## Implementation of Transport Information and Control Systems (TICS)

## The 1995 World Radiocommunication Conference

#### considering

- a) that there is a need to integrate new technologies including radiocommunications into land transportation systems;
- b) that many new land transportation systems use intelligence in the land vehicles coupled with advanced management techniques to improve traffic management;
- c) that the technologies planned for TICS can be applied to public transportation (transit) systems to make them more efficient and to enhance the integrated use of all forms of surface transport;
- d) that TICS are being planned and implemented in various Regions by Administrations;
- e) that a wide variety of applications and services are defined;
- f) that international standards would facilitate the world-wide applications of TICS and provide for economies of scale in bringing TICS equipment and services to the public;
- g) that early international harmonization of TICS would have several benefits;
- h) that world-wide compatibility of TICS may be dependent on common radio spectrum allocations;
- i) that radio is an essential component of TICS;
- j) that the international Organization for Standardization (ISO) is standardizing Transport information and Control Systems (non-radio aspects) in ISO/TC204;

## considering further

k) that in various Regions frequency bands under discussion for TICS include 76-90 MHz, 150 MHz, 450 MHz, 220 MHz, 902-928 MHz, 2.4 GHz, 2.5 GHz, 5.8 GHz, 60 GHz, 63-64 GHz, and 76-77 GHz;

## considering further

- l) that the Radiocommunication Sector has adopted a Question on TICS;
- m) that the Radiocommunication Sector is engaged in studies of various aspects of TICS including the spectrum requirements for these systems;
- n) that the Radiocommunication Sector has resolved to complete these studies by 1997 and that the results will be included in (a) Recommendation(s);

invites the Director of the Radiocommunication Bureau

to continue the studies by the Radiocommunication Sector of TICS and complete its work in time for the 1997 World Radiocommunication Conference:

resolves to give the view

that the agenda of 1997 World Radiocommunication Conference should be amended to include consideration of TICS including, if necessary, modifications of Article 8 of the Radio Regulations applicable to all three Regions;

invites the Council

to consider the view given in this Resolution.

6.2.1.5 Support for Proposal for Additional Intersatellite Service (ISS)
Allocation at 65-71 GHz

Teledesic Corporation has applied to the FCC for a license to build and operate a non-Geostationary Orbit (nonGSO) Fixed-Satellite Service (FSS) system that would provide global interconnectivity via wide band (bandwidth on demand) communications. In that application, it is proposes to use 59.5-60.5 and 62.5-63.5 GHz for inter-satellite links (ISLs) to interconnect the satellites and to provide the message routings between different points on the Earth.

Frequency overlap with another user of the inter-satellite service allocation from 59-64 GHz has led to a request for Teledesic to reposition its ISL frequencies to 56.75-57.75 GHz and 59.0-60.0 GHz. In the band 54.25-58.2 GHz there is a co-primary allocation to the Earth exploration-satellite service for passive sensing of scientifically unique oxygen absorption lines. This band is used to carry out atmospheric termperature measurements on an operational basis that are nededed in weather forecasting and climate studies. Teledesic inter-satellite links with their large number of active transmitters in low-earth orbit have the potential to interfere with the Earth pointing passive sensors of the Earth exploration-satellite service.

Accommodating the ISL requirements of the current Teledesic proposal may be possible, subject to more detailed technical study. However, expansion of the currently proposed system to meet future market demands, or the introduction of additional satellite communications systems requiring ISL's would likely render the band unusable to teh Earth exploration-satellite service.

Thus, to provided for continued growth of satellite communications that would use ISL frequencies near 60 GHz, IWG-6 supports the inclusion on the agenda of WRC-97 of:

"the allocation of the band 65.0-71.0 GHz to the Inter-Satellite Service on a primary basis".

## 6.2.2. Proposals from other IWGs

#### 6.2.2.1 IWG-3 Referral of MSS Items

6.2.2.1.1 R	Revise Res.	46 as gain	n experience	with	nonGSO	MSS
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- 6.2.2.1.2 Review effect of RR2613 with regard to implementation
- 6.2.2.1.3 Review MSS service link spectrum requirements at 1-3 GHz
- 6.2.2.1.4 Review MSS feeder link spectrum requirements

#### 6.2.2.2 IWG-5 Referrals

6.2.2.2.1 Upgrade space research status in 410-420 MHz band

The 410-420 MHz band is allocated to the space research service on a secondary basis. The principal US space program use would be for astronauts engaging in space-to-space communication within 5 km of a manned space station. Because the space agency of at least one other administration is planning to use this band, power flux density (pfd) limits would be needed to protect existing US terrestrial fixed and mobile systems.

Establishment of pfd limits and upgrade to co-primary service would be concomitant events. Given the increasing competition for spectrum, upgraded allocation status is necessary to: (1) protect the existing allocations to FSS and MSS in this frequency band; and (2) protect US space program investment. The burden of establishing the source of interference is on the primary service. Once pfd limits are established, the responsibility to comply with those limits would be on the space research user (assuming co-primary status). This would create a friendlier coordination environment than exists today.

Sharing conditions are under review based on the work carried out in preparation for JTWP-91. Analysis is being conducted in Study Group 7 to establish appropriate pfd limits. These findings will be submitted to the Radio Conference Subcommittee (RCS) as well as the National Committee prior to submission to ITU-R SG7. Rsults of this work are anticipated in early 1995.

## 6.2.2.2.2 Review allocation status for active space-based sensors

The need to establish common worldwide primary allocations to the earth exploration satellite service for use by active space-based earth sensors is discussed in IWG-5's interim report at Section 5.4.2. Greater protection could be afforded to both terrestrial radiolocation/radionavigation systems and to active spaceborne sensors if there were common primary frequency allocations in the Table of Frequency Allocations. The common primary frequency allocations would help to protect all these services from pressure brought by expanding requirements of other services.

Resolution 712 is on the preliminary agenda for WRC-97 and proposes a review of allocations to the earth exploration-satellite service and the space research service in the frequency bands between 8-20 GHz with a view to establishing common worldwide primary allocations to these services in appropriate bands. There are several active sensor alocations falling outside this frequency range which also need to be considered. These include 1215-1300 MHz, 3100-3300 MHz, 5250-5350 MHz, 24.05-24.25 GHz and 78-79 GHz. WRC-97 may provide a timely opportunity to do so, particularly in light of the analogous treatment of allocations in the 8-20 GHz band.

As in the 8-20 GHz case, primary allocations for active sensors depend upon compatibility between the sensors and the existing terrestrial systems (radiolocation or radionavigation) in any given frequency band. Such studies are under way now in Joint Working Party 7/8R on a band-by-band basis. However, the JWP has already developed representative technical characteristics for Synthetic Aperture Radars (SAR) for the 1215-1300 MHz and 5250-5350 MHz bands and has reviewed the operational experience gained from operation of altimeters and scatterometers in the 5350-5350 MHz band. No instances of unacceptable interference have been identified in either band. This information has been reported to CPM-95 Since JWP 7/8R expects to ecomplete its work in time for inclusion of its findings in the report of the 1997 Conference Preparatory meeting to WRC-97, it wold be feasible to review all active sensor allocations at the 1997 WRC.

Two additional frequency bands, currently unallocated for active sensing, have been identified as necessary for future active spaceborne sensor applications. An allocation in the vicinity of 420-450 MHz is needed, primarily for soil moisture measurements. Also, it has been determined that a frequency band near 95 GHz would be more suitable for cloud radar operations than the existing allocation at 78-79 GHz. It would be desirable to investigate substitution of an allocation at 95 GHz for the one at 78 GHz.

6.2.2.2.3 Adoption of Sharing Criteria To Support Space Science Service Operations in the 2025-2110 and 2200-2290 MHz Bands

Operations of all services currently using these bands (e.g., fixed, mobile, and the space science services) will benefit from established sharing criteria. The necessary studies are underway regarding the sharing criteria between the space science services and the fixed service in these bands. ITU-R Task Group 7/1 has completed its studies on space science and mobile service sharing within these bands. Joint Working Party 7B/9D is examining sharing between the space science and fixed services. Upon completion of this work it may be an appropriate time to incorporate the results into the Radio Regulations. Mobile service sharing criteria in these two bands is already addressed in Resolution 211 which is contained in WRC-97 agenda item 2.1.

6.2.2.2.4 New primary allocation to intersatellite service at 61-75 GHz

Unique oxygen absorption lines exist in the frequency bands between 50.2 and 65 GHz. Recognizing the value of this singular scientific resource, WARC-79 allocated the bands 50.2-50.4 GHz and 51.4-59.0 GHz to the earth exploration-satellite service (passive) to be used for the atmospheric temperature measurements necessary for weather forecasting and climate studies. Unfortunately, the entire bands are not allocated on an exclusive basis.

The band 54.25-58.2 GHz is allocated on a co-primary basis to the inter-satellite service and may be used by satellite systems for inter-satellite links (ISLs) (i.e., crosslinks which interconnect one or more satellites in a constellation. one commercial LEO satellite system is considering use of the inter-satellite service allocation in the 56.75-57.75 and 59.0-60.0 GHz bands to implement satellite-to-satellite crosslinks and to provide message routings between multiple points on the Earth. This system will require bandwidths on the order of 1 GHz in each of the transmit and receive directions initially, with predicted requirements growing to 3 GHz in the foreseeable future.

The commercial LEO in question has already been requested to reposition its ISL frequencies from the 59.5-60.0 GHz bands which are named in the present application to the FCC. This request is the result of a frequency overlap with another inter-satellite service user in the 59-64 GHz band. This band is heavily used by government systems, and NASA has plans for data relay satellite systems which will use most of the available bandwidth. The 56.75-57-75 and 59.0-60.0 GHz bands have come under consideration as an alternative.

Additional LEO satellite commercial providers are expected to file for FCC licensing in the near future. The anticipated large number of active transitters in low earth orbit have the potential to interfere with the passive earth sensors operating in the 54.25-58.2 GHz band. This use, coupled with use of the band by terrestrial fixed and mobile services could

render the band unusable for atmospheric sensing measurements by the Earth explorationsatellite service.

The band 65-71 GHz has been proposed as a useful alternative for commercial LEO satellite crosslinks. Such an allocation would require demonstration of the feasibility of sharing with the existing allocated service systems. If preliminary coordination does not reveal any major obstacles it may be proposed that a future WRC agenda include allocation of the 65-71 GHz band to the inter-satellite service with co-equal primary status.

- 6.2.3 Items from WRC-92 Preliminary Agenda for WRC-97
  - 6.2.3.1 Reogranization of Items
  - 6.2.3.2 Recommended deletions
- 6.2.4 Items outstanding from WRC-93 Recommendations/ Resolutions

Resolutions and recommendations are under review by IWG-6.

- 6.3 Preliminary Agenda for WRC-99
  - 6.3.1 Identify carry-over proposals from WRC-97
  - 6.3.2 New proposals
    - 6.3.2.1 Proposal for international amateur radio permit on agenda for WRC-99.

Seeking to build on licensing recognition developments across national borders in the America's and Europe, The American Radio Relay League, Inc. urges United States support for amateur radio operators to be able to operate in countries other than home countries with minimal delay.

## ARRL specifically asks that

The United States should propose the inclusion of an international amateur radio permit on the agenda of WRC-99. The objective is to facilitate operation by radio amateurs in foreign countries by adopting a worldwide system benefiting from the work done under CEPT Recommendation T/R 61-01 in Europe and CITEL International Amateur Radio Permit in the America's proposed for consideration by the OAS at its 1995 General Assembly.

## 6.4. Views on Preliminary Agenda for WRC-2001

- 6.4.1 Identify carry-over proposals from WRC-99
- 6.4.2 New proposals
  - 6.4.2.1 None identified

#### 6.5. Recommendation for Renewal

IWG-6 strongly recommends timely renewal of the Advisory Committee, which is best forum for informing United States Government, under current law. The text describes the policy and legal framework in which WRC preparation must occur.

6.5.1 US Industry Participation in Conference Preparation Under the Two Year Radiocommunication Conference Cycle

Background - The High Level Committee (HLC) was established to make recommendations for reorganizing the International Telecommunications Union (ITU) and changing its working methods to be more responsive to the rapidly changing technology and telecommunications environment. This was considered especially important to the ITU if the challenge of the regional standards setting bodies was to be met in the face of limited budgetary growth.

The HLC that recognized, among other things, that the process for changing the Radio Regulations, in particular the process by change to the Table of Frequency Allocations were made, was lengthily. Changes to the Radio Regulations can only be made by a world conference. Traditionally, these were called World Administrative Radio Conferences (WARCs) and they were held on an as needed basis with a lead time of three or four years to allow for the preparation of technical studies to support the proposed changes. None-the-less, since 1979, the Conference have been held, on average, every two years.

Thus, as one of its recommendations, the HLC suggested that the radio conferences be held every two years with the thought that successive conferences would deal with different subjects. The shorter two year conference cycle is intended to allow a particular conference to focus on a limited number of issues. The knowledge that the next conference follows in two years should to reduce pressure to broaden the current conference agenda. Other pressing issues could be considered in a timely fashion at the next Conference.

## Working within the two year conference cycle

The two year period between conferences is sufficient time to fully establish the technical justification for modifications to the Table of Frequency Allocations if the

necessary technical studies are sufficiently complete. It can be expected that technical studies to support potential conference items will be initiated three to four years in advance based on a tentative conference agenda. The following working method was adopted at the 1993 Radiocommunications Assembly to allow a four year period for the Study Groups to prepare for conferences that run on a two year schedule.

Under the developed working method, there will be two meetings of the Conference Preparatory Meeting (CPM) in the interval between conferences. The first CPM is to coordinate the work of the Study Groups based on the agenda for the next two Conferences. This meeting is foreseen to be of short duration. The second CPM, for example CPM95, will:

- prepare the report to form the technical and regulatory basis for the 1995 World Radiocommunication Conference (WRC-95) and
- review the progress of preparatory studies for agenda items to be considered at WRC-97.

For the following WRC in 1997, an identical international preparatory structure will emerge. CPM-96 will meet early in the year to coordinate the work necessary for WRC-97, based on the definitive agenda, and WRC-99, based on the tentative agenda. To smooth the flow of work from CPM-94/95 to CPM-96/97, the vice-chairman of CPM-94/95 responsible for coordination of the preliminary work of the Study Groups for WRC-96/97 will become the chairman of CPM-96/97.

Thus for the work of the future conferences, the technical work of the study groups will begin once a tentative agenda has been set for the conference to follow in four years. The initial two years of work will be coordinated by a vice-chairman of the CPM. This vice-chairman will then become chairman of the CPM for the last two years of work to take place directly before the conference.

#### **US Government Participation**

The US Government has been very supportive of changes to the international conference process that would allow new technology and new applications to be implemented in a more timely manner. The two year conference cycle promises to do this. In order to be properly prepared for the conferences and recognizing the overlapping four year preparation cycle, both NTIA and the FCC have established internal processes whereby there is essentially a continuous consideration of conference agenda items.

## **US Industry Participation**

The cooperative relationship between US industry and the US government has positioned the US at the leading edge of telecommunication technology and provision of

advanced services. However with increasing global competition and with the restructuring of the ITU to make it more responsive, time-proven domestic administrative procedures defining when and how US industry may participate in conference preparatory activities, namely participate in the CPM process, are inadequate to maintain the pre-eminent position of the US in radio based telecommunications.

The participation of US industry in all phases of conference preparatory activities is vital. Industry develops the technology, assesses market potential and attracts capital to bring new services on line. In the conference preparatory process, technical sharing discussions will likely involve striking a balance between system performance and economic viability. Such a trade-off can only be made by the system proponents. Further, competition within industry in the conference preparatory process serves to hasten the introduction of new services and to assure the most economic provision of services. The two year conference cycle gives industry the opportunity to implement systems as fast as technology and the market place will allow.

However, the two year conference cycle will be effective only if suitable new (or modified) allocations are made. The international process has been arranged to allow a four year conference preparation cycle (study cycle) and the internal government process have been made essentially continuous. However, the process for US industry is limited by legislation to a two year cycle. Given, for example, that the work for WRC-97 is well underway, this means that after WRC-95, the industry group working on the 97 Conference will be dissolved and then, after an administrative delay of perhaps three to six months, will be re-established to resume its work. The needless interruption of work will detract from the competitive position of US industry in the global telecommunications service market place.

Conclusion - In competing in the global telecommunications market place, the US has been particularly effective in having a cooperative and open information exchange between industry and Government. It is imperative that this relationship be maintained and even enhanced. However, it may be more important that industry be allowed to either participate in four year conference preparation cycle or establish for itself a continuous working method for conference preparation.

6.5.2 The Legality of Establishing A Permanent Advisory Committee to the Federal Communications Commission On World Radiocommunication Conferences

This paper examines the legality of establishing a permanent industry advisory committee to advice the Federal Communications Commission on U.S. preparations for World Radiocommunication Conferences of the International Telecommunications Union. Specifically, this paper addresses the legality of creating an industry advisory group outside of the requirements of the Federal Advisory Committee Act and concludes that this approach would be risky. Teledesic Corporation suggests that a better approach is for the Federal Communications Commission to create a continuing, "permanent" industry advisory

committee that is compliant with the requirements of the Federal Advisory Committee Act.

In the past, the Federal Communications Commission ("FCC" or "Commission") has convened Industry Advisory Committees ("IACs") to assist it with its preparation for World Administrative Radiocommunication Conferences of the International Telecommunications Union. In July of 1994, the FCC convened an IAC "to provide to the agency advice, technical support and recommendations relating to preparation of U.S. proposals and positions for the 1995 World Radiocommunication Conference." See Public Notice, No. 43907 (released July 14, 1994); see also Public Notice, 59 Fed. Reg. 28,532 (1994).

Both industry and government have noted several problems associated with convening IACs to assist the FCC with preparation for World Radiocommunication Conferences ("WRCs"). First, the process involved in establishing an IAC is slow and administratively burdensome because of the processes the FCC must follow that are detailed in the Federal Advisory Committee Act ("FACA"), Pub. L. No. 92-463, 86 Stat. 770, codified at 5 U.S.C. Appx. II (1988). Second, under current law, the FCC is only permitted to establish an IAC with a two year charter. This presents problems in continuity for the Commission and industry since WRCs are based on a four year planning cycle. FACA, Section 14(a). Therefore, the FCC has to renew the IAC charter in order to use IACs throughout the WRC planning process.

Teledesic Corporation has examined the legality under the FACA of establishing a permanent industry group to assist the FCC in planning for upcoming WRCs. After reviewing the enabling statute for IACs, the FACA, and examining the other types of industry advisory groups, Teledesic believes that there is only one alternative to use of an IAC available given the existing law. If industry chooses, it could form a voluntary group to advise the FCC on up-coming WRC matters. This group, however, would have to be completely devoid of U.S. government involvement. U.S. governmental participation, even on an informal basis, would be prohibited under the FACA, which is very broad in its definition of "advisory committee." This definition includes any committee or form thereof, that is "established or utilized" by one or more agencies or the President. FACA, Section 3.

In addition, this industry group could not be "utilized" by the FCC. See Public Citizen v. U.S. Dept. of Justice, 491 U.S. 440 (1989) (finding use by the President of an American Bar Association committee on the federal judiciary to determine fitness of judicial nominees not within the purview of FACA) ("Public Citizen"). Public Citizen sent a clear signal that an industry group could be required to comply with the FACA if it was being utilized in the same manner as a government-formed committee. See 491 U.S. at 451-465; see also Washington Legal Foundation v. U.S. Dept. of Justice, 691 F.Supp. 483, 490 (main purpose of FACA is to open to public scrutiny the manner in which the government obtains advice from the public), aff'd sub. nom. Public Citizen v. U.S. Dept of Justice, 491 U.S. 440 (1989). Therefore, under Public Citizen, the FACA is applied to "groups organized by or closely tied to the Federal Government, and thus enjoying quasi-public

status." 491 U.S. at 461; see Food Chemical News v. Young, 900 F.2d 328, 332 (D.C. Cir. 1990).

In any event, formation of a voluntary, permanent industry group on WRCs is legally risky. First, it is unlikely that courts would find that such a committee was not fulfilling "quasi-public" functions, especially given the fact that the use of an IAC to advise the government on WRCs has been undertaken in the past by the FCC under FACA. Hence, the use of a permanent industry group on WRCs could be construed as nothing more than a smoke screen masking the true "quasi-public" nature of the group in order to escape the requirements of FACA. Additionally, the formation of such an industry group may have certain anti-trust implications which are beyond the purview of this paper.

Teledesic believes that the best approach is for the FCC to continue to convene an IAC to assist it in WRC preparation. The FCC should ensure that this is a continuing, "permanent" industry advisory committee that is compliant with FACA requirements. In order to guarantee that this group is "permanent" in nature, the FCC should, possibly with industry assistance, seek renewal of the charter of the IAC on a timely basis. See Permanent FCC Advisory Committee on WRCs, IWG/6-12 (submitted Dec. 12, 1994).

## 6.5.3 Permanent FCC Advisory Committee on WRCs

This paper proposes that the Federal Communications Commission charter a permanent industry committee to advise the FCC on U.S. preparations for World Radiocommunication Conference (WRCs) of the International Telecommunication Union.

Advisory Committee for the 1995 ITU World Radiocommunication Conference. <sup>2</sup> The Committee's purpose is to "advise the FCC staff on topics relating to preparations for WRC-95" and to "develop and present proposals and positions on topics to be addressed at WRC-95." Similarly advisory committees were formed for WARC-92, and prior WARCs. Unfortunately, there is a no direct linkage between the current and previous advisory committees, and thee is no single repository of previous WARC documents. Thus, the knowledge and experience gleaned from prior conferences is passed along only informally, if not lost altogether.

<sup>&</sup>lt;sup>1</sup> Advisory committees established by an act of Congress are exempt under the FACA. FACA, Section 4. The U.S. government may want to examine this approach further in its efforts to improve efficiency in the WRC planning process.

<sup>&</sup>lt;sup>2</sup>Notice, 59 Fed. Reg. 28,532 (1994).

 $<sup>^{3}</sup>Id$ .

<sup>&</sup>lt;sup>4</sup>See 55 Fed. Reg. 11, 433 (1990).

## II. FCC ADVISORY COMMITTEES IN GENERAL

## A. FACA and GSA Rules

Any advisory committee established or utilized by the FCC must operate in accordance with the Federal Advisory Committee Act (FACA).<sup>5</sup> FACA requires, for example, that advance public notice of meetings be given in the Federal Register, and that "[i]nterested persons shall be permitted to attend [meetings of], appear before, or file statements with [an advisory committee].<sup>6</sup> In addition, FACA empowers the President and the Office of Management and Budget to guide and coordinate the administration of the act. These functions were transferred to the General Services Administration.<sup>7</sup> The GSA's advisory committee rules are set forth in Title 41 of the Code of Federal Regulations.<sup>8</sup>

## B. Antitrust Considerations

Companies must be cautious of antitrust law constraints whenever they gather to reach agreement on matters of mutual interest. The so-called Noerr-Pennington doctrine shields from antitrust prosecution any group of companies that merely attempts to influence the legislative or executive branches of government. Because federal advisory committees are established specifically to influence and advise government agencies, they are protected from antitrust enforcement by the Noerr-Pennington doctrine. Without such protection, companies gathered for the benign purpose of planning for future WRCs might be susceptible to antitrust liability.

## C. Prior FCC Experience

The FCC has established several advisory committees in recent years. These committees range from small (fewer than [fifty] people have participated in the Small Business Advisory Committee<sup>10</sup>) and short duration (the 28 GHz Negotiated Rule Making

<sup>&</sup>lt;sup>5</sup>Pub. L. No. (2-463, 86 Stat. 770, codified at U.S.C. app. II (1988).

<sup>65</sup> U.S.C. app. II § 10 (1988).

Executive Order No. 12,024, 42 Fed. Reg. 61,445 (1977).

<sup>841</sup> C.F.R. §§ 101-6.1001 - 101-6.1035 (1993).

<sup>&</sup>lt;sup>9</sup>This doctrine was extended to administrative agencies in California Motor Transport Co. v. Trucking Unlimited, 404 U.S. 508 (1972).

<sup>&</sup>lt;sup>10</sup>See 59 Fed. Reg. 31,246 (1994).

Committee <sup>11</sup> completed its work in only a few months), to huge and long-lived (the FCC's Advisory Committee on Advanced Television Service<sup>12</sup> is over seven years old and has had over 1000 participants). As indicated above, the Commission also has established an advisory committee for each of the recent ITU world radio conferences.

#### D. Executive Order 12838

Soon after taking office, President Clinton ordered executive branch agencies to reduce by at least one-third the number of advisory committees subject to FACA but not required by statute.<sup>13</sup> Further, executive branch agencies were ordered to create or sponsor a new advisory committee only if the relevant agency "finds that compelling considerations necessitate creation of such a committee," and receives OMB approval.<sup>14</sup>

Executive orders typically apply only to executive branch agencies, but not to independent regulatory agencies like the FCC. Although the President only requested, <sup>15</sup> as opposed to ordered, the independent agencies to comply with Executive Order 12838, certainly the Commission would prefer to follow the Order's spirit, which is to eliminate unnecessary advisory committees and limit the total number of such committees per agency.

#### III. PROPOSAL FOR PERMANENT ADVISORY COMMITTEE

In Order to (1) maintain inter-conference continuity of private sector input to the FCC's WRC preparations, (2) establish a single repository for old and new WRC documents, and (3) assuage the antitrust compliance concerns of industry participants, the FCC should establish a "permanent" WRC Advisory Committee to advise the Commission staff on topics relating to WRC preparations and to develop and present proposals and positions on topics to be addressed at WRCs. 16

Without such a permanent body, the knowledge and experience gleaned from

<sup>1159</sup> Fed. Reg. 33,483 (1994).

<sup>&</sup>lt;sup>12</sup>52 Fed. Reg. 38,523 (1987).

<sup>&</sup>lt;sup>13</sup>Executive Order No. 12,838, 3 C.F.R. 590 (1994).

<sup>14</sup>Id. at § 3.

<sup>&</sup>lt;sup>15</sup>See Id. at § 5.

<sup>&</sup>lt;sup>16</sup>Of course, no such body is truly permanent. The FCC could, at its option, dissolve the "permanent" advisory committee at any point. The WRC Advisory Committee would be desirable regardless of whether or not the FCC opens a permanent rule making docket on WRC preparations.

prior WRCs will be passed along to current and future U.S. WRC preparatory efforts only informally, if not lost altogether, and there will be no single repository of conference documents. Although this situation may have been less egregious before 1993, when the ITU decided to abandon its ad hoc approach to scheduling WARCs, the lack of continuity between U.S. private sector WRC preparatory efforts may seriously hinder U.S. preparations now that there is a biennial schedule for WRCs. More than ever before, there is a need for a single, permanent WRC Advisory Committee to facilitate and focus private sector input to the FCC. Establishment of a permanent WRC Advisory Committee will result in better prepared U.S positions, proposals, and delegations, and is clearly in the public interest.

More specifically, the FCC should charter a permanent WRC Advisory Committee that would have the flexibility to create and dissolve subcommittees as warranted. The most straightforward approach would be to create one subcommittee for each WRC immediately after the WRC is planned by the ITU, then dissolve the subcommittee, say four (4) months after the WRC is held.<sup>17</sup> Each of these subcommittees could have several work groups devoted to the specific issues on the agenda of the relevant WRC. The subcommittee for WRC-97, for example, would have the same basic structure as the current industry advisory committee.

As with the FCC's Advisory Committee on Advanced Television Service, most of the committee's work would not be performed by the 20-30 members of the appointed "parent" advisory committee, but rather, by the many volunteer participants who populate the subcommittees and work groups. Of course, because different participants will have different interests and expertise, volunteer participation will vary among subcommittees and working groups. Further, like the existing WRC Advisory Committee, various FCC staff members ("designated federal employees") could be assigned as liaisons to each of the subcommittees and working groups. Active membership on the parent WRC Advisory Committee could be expected to change over the years as the focus of each WRC changes. The Commission may also wish to establish a rotating chairmanship arrangement; one procedure might be to appoint the chair for a fixed term ending four months after the current WRC.

A permanent WRC Advisory Committee organized as described above would be a valuable asset to the FCC in facilitating U.S. private sector preparations for WRCs and would comply fully with the FACA and GSA regulations. Further, the operation of the subcommittees and working groups with varying participants and issues certainly is familiar to the FCC in the context of its existing WRC Advisory Committee. Finally, because there would be no net increase in the number of FCC advisory committees, establishing a permanent WRC Advisory Committee would meed the letter and spirit of Executive Order 12838.

<sup>&</sup>lt;sup>17</sup>This would mirror the federal agency preparatory process in the Interdepartment Radio Advisory Committee, wherein an "ad hoc" subcommittee is formed for each WRC.

Therefore, the FCC can and should, in the public interest, charter a permanent industry committee to advise the Commission on U.S. preparation for WRCs.

## 6.5.4 Antitrust Considerations of Private Industry Joint Efforts to Inform FCC on International Communications Issues

This paper considers whether a group of private business interests, set up under the auspices of a government agency, will be shielded from antitrust liability if they engage in negotiations and agreements on matters of mutual interest. It also considers whether a group of private business interests, not supervised by a government agency, can meet and negotiate various matters to present to an agency, without being in danger of antitrust liability.

Anticompetitive behavior will be afforded "state action" immunity if it is endorsed by the clear policy of the State, and is actively supervised by the State. Therefore, if a group of private business interests were set up by a government agency, state action immunity would depend upon the supervision afforded by the agency. If immunity is to attach, the agency must conduct an independent review of the policies the group establishes. Mere rubber stamping will not suffice.

If the group is not formed under the auspices of a government agency, immunity from antitrust liability can attach under the <u>Noerr-Pennington</u> doctrine if the group meets for the purposes of influencing government action. However, the action should be for a political purpose and not purely economic. For example, although a group can lobby for the passage of certain legislation, the effect of which would be anticompetitive, the group can not agree to set certain rates, or exclude certain members from the industry.

#### DISCUSSION

## A. Antitrust Liability if the State is Involved

In <u>Parker v. Brown</u>, 317 U.S. 341 (1943), the Supreme Court established a "state action" immunity from the antitrust laws, in which certain anticompetitive behavior endorsed and supervised by the government will be shielded from antitrust liability. To qualify for this immunity, private parties who engage in anticompetitive behavior under the auspices of a government agency must satisfy a two-pronged test. First, the government regulation endorsing the anticompetitive actions must be "'clearly articulated and affirmatively expressed as state policy.'" <u>California Retail Liquor Dealers Assoc. v. Midcal Aluminum. Inc.</u>, 445 U.S. 97, 105 (1980) (quoting <u>City of Lafavette v. Louisiana Power & Light Co.</u>, 435 U.S. 389, 410 (1978)). In addition, the government must actively supervise the policy. Id.

In this situation, if the group of private business interests was organized by a

federal agency, it is quite likely that its actions would satisfy the first prong of the test. For example, when a state agency is authorized to regulate and set rates, its approval of anticompetitive behavior implies that the behavior is supported by government policy. See DFW Metro Line v. Southwestern Bell, 988 F.2d 601 (5th Cir. 1993) (rate setting by state public utility agency constitutes "articulated state policy"). Here, the FCC is an agency that has been granted regulatory authority over the communications industry, therefore, if the FCC set up a group of private business interests to negotiate and discuss trade issues, such action would most likely be considered to be supported by government policy. 18

However, whether the organization would be entitled to "state action" antitrust immunity would depend upon the second prong of the test--whether the anticompetitive actions are "actively supervised" by the government agency. The Supreme Court recently clarified the requirements of active supervision:

[T]he purpose of the active supervision inquiry is not to determine whether the State has met some normative standard, such as efficiency, in its regulatory practices. Its purpose is to determine whether the State has exercised sufficient independent judgment and control so that the details of the rates or prices have been established as a product of deliberate state intervention, not simply by agreement among private parties. [T]he analysis asks whether the State has played a substantial role in determining the specifics of the economic policy. The question is not how well state regulation works but whether the anticompetitive scheme is the State's own.

FTC v. Ticor Title Ins. Co., 112 S. Ct. 2169, 2177 (1992). In <u>Ticor</u>, title insurance companies in several states had established rating bureaus to set uniform rates for their members. The rating bureaus were private entities, but were licensed and authorized by the States to set rates. Although the Court remanded to determine whether the States had exercised sufficient supervision to grant "state action" immunity, the Court held that the mere rubber stamping of rates would not constitute sufficient supervision. Indeed, the Court specifically concluded that negative option rules, in which the rates became effective unless rejected within a set time, would not meet the standard. Id. at 2178.

Ticor sounds rather analogous to one of the possibilities you described, i.e. the FCC would authorize the establishment of a group comprised of private and non-governmental interests to make policy and rate recommendations. Under Ticor, if the FCC merely acted as a rubber stamping agency, and approved the suggested positions without an independent analysis, it seems likely that state-action immunity would not apply. However, if the FCC did engage in an independent review of the policies, immunity would be much more likely to attach. According to Ticor, any anticompetitive scheme must be the agency's own.

<sup>&</sup>lt;sup>18</sup>The specific terms of the authorizing instrument could bolster or weaken this conclusion.